

Remarks

Priority

The Office Action acknowledges receipt of the papers submitted to claim priority under 35 USC 119 (a – d). However, the cover page of the Office Action notes the filing date for this application is 09/07/2004. It should be noted that this application entered into the national stage on 09/07/2004 and is a PCT application, whose filing date was 02/19/2003.

Drawings

The Examiner has objected to the drawings. The Examiner notes that the connection line of Claim 2 and the conic cross-section of Claim 3 are not shown in the drawing.

Claim 2 has been amended so that the “connection line” has been deleted. A reference “20” indicating the cross-section of the curvature of Claim 3 has been inserted in Figure 1.

Please find attached an amended replacement drawing sheet, labelled “Replacement Sheet”.

A Letter to the Draftsperson of the USPTO is submitted herewith, including a proposed drawing correction, in which the cross-section of the curvature of Claim 3 has been inserted in red in Figure 1.

The Specification

The Office Action objects to the specification for failing to provide proper antecedent basis for the claimed subject matter and also because it refers to a particular claim of the disclosure. The specification has been amended.

Specifically, the Examiner notes that neither the cross-section as pertaining to a conic section of Claim 3, nor the connection line of Claim 2, have been described and that the specification may not refer to a particular claim of the disclosure (i.e., page 1, lines 4-5 and page 3, line 14).

The amended specification describes the cross-section as pertaining to a conic section of Claim 3.

The amended specification does not refer to a particular claim of the disclosure. Applicant respectfully believes that the amendment overcomes the Examiner's objections. Further, the specification has been amended to conform the specification to U.S. style and practice by adding headings to the specification.

A clean version of a substitute specification to be entered is submitted with this Amendment, together with a marked up version as per 37 CFR 1.125, as many of the paragraphs were changed.

The changes made in the substitute specification are set forth as follows:

Paragraph [0001], line 2, "which" is deleted and "whose first side" is inserted.

Paragraph [0001], lines 2 and 3, "according to the precharacterizing clause of claim 1" is deleted.

Paragraph [0002], line 2, "the first side of" is inserted after "illuminating".

Paragraph [0002], line 3, "the first side of" is inserted after "capturing an object placed on".

Paragraph [0002], lines 5 and 6, "the first side facing upwards and facing the light source and the capturing means" is inserted after "support surface".

Paragraph [0006], line 1, “European Patent Document” is inserted before “EP 0 362 737 B1”.

Paragraph [0007], lines 2 and 3, “placed on a first side of a support surface” is inserted after “capturing objects”.

Paragraph [0008], lines 2 and 3, “in which the characterizing features of independent Patent Claim 1 are realized” is deleted and “comprising a support surface on which whose first side an object can be placed, a light source which is provided for emitting illuminating beams in the direction of the support surface and which, in a first position, is arranged relative to the support surface, and a capturing means which is provided for capturing the object positioned object placed on the support surface – and optionally for converting the image of the captured object into electrical signals – and which, in a second position, is arranged relative to the support surface, wherein the first side of the support surface, on which the object can be placed, faces the illuminating beams and the capturing means, wherein the first side of the support surface has a flat region and – adjacent to this – a section which is provided with a curvature determined by the two positions and which is arranged in such a way that the illuminating beams are reflected by the section in the direction of the capturing means substantially in a diffuse manner” is inserted.

Paragraph [0009] “Further advantageous or alternative developments and further developments of the invention are described in the features of the dependent Patent Claims” is deleted.

Paragraph [0014], line 2, “as a partial section” is deleted, and “perpendicular” is inserted after “in”.

Paragraph [0016], line 2, “perpendicular” is inserted after “in the position for use, in the”.

Paragraph [0017], lines 3 and 4, “corresponds – in said perpendicular side view in cross-section – to a segment of a conic section 20” is inserted after “from Figure 1”.

Paragraph [0022], line 3, “ – in the direction of the capturing means 5 – “ is inserted after “in only one direction”.

The Claims

Claims 1-6 are currently under examination. Claims 1-3 have been amended in this submission.

Support for Amendments Made in this Submission

Support for “first side” of the support surface, on which the object can be placed, as amended in Claim 1 and the specification reflect the changes to Claim 1, may be found in the Drawings. It is clearly evident that the support surface of a device for optically capturing objects, which are placed on said support surface, must have at least one side on which these objects can be placed (see page 1, paragraph [0001], line 2 through paragraph [0002], line 3, in view of page 3, paragraph [0008], as well as Figures 1 and 2).

Support for “object placed on the support surface (2)” as amended in Claim 1 may be found on page 1, paragraph [0002], lines 2 and 3.

Support for “wherein the first side of the support surface (1), on which the object can be placed, faces the illuminating beams (2, 3) and the capturing means (5)” as amended in Claim 1 and the specification to reflect the changes to Claim 1, may be found in the specification, page 4, paragraphs [0013] and [0014]. (Here “the support surface 1 substantially forms the top of the base housing 13 and faces the capturing means 5” may be found on page 5, paragraph [00017], lines 2-5. (“The light source 4 emits illuminating

beams in the direction of the support surface 1. Thus, by way of illustration, a first and a second beam 2 and 3, respectively, are directed towards the support surface 1, starting from the light source 4”), as well as clearly in Figure 1. Figure 1 shows that the first side of the support surface, on which objects can be placed, faces upward (see also page 4, paragraph [0013]) and faces the illuminating beams (2, 3), the light source (4) and the capturing means (5).

Support for “support surface (1) has a flat region (16) and – adjacent to this – a section (6) which is provided with a curvature”, as amended in Claim 1, may be found in the specification, page 5, paragraph [0013]. (“The support surface 1 has a section 6 provided with a curvature and a flat region 16 adjacent to this”).

Support for “curvature only in the direction of the capturing means (5)”, as amended in Claim 2 and the specification to reflect the changes to Claim 2, may be found in the specification, page 6, paragraph [0019], lines 5-9, and page 7, paragraph [0020], lines 4-5, as well as in Figures 1 and 2. It is clearly evident that a curvature in only one direction with a radius, adjacent to a flat region, having a smooth transition with the flat region (as described in the specification, page 5, paragraphs [0013] and [0014]) must be directed to one of two sides. According to Figure 1, the curvature with its mean radius (page 6, paragraph [0019], line 7) is directed upwards, and therefore in the direction of the capturing means (clearly evident from Figure 1).

Support for the “curvature corresponds – in perpendicular cross-section – to a segment of a conic section”, as amended in Claim 3, and “in perpendicular side view” as amended in the specification, page 4, paragraph [0012], lines 2 and 3, and page 5, paragraph [0014], lines 1 and 2, may be found in the specification, page 5, paragraphs

[0013] and [0014] (“In this embodiment – as clearly evident from Figure 2 – the curved section 6 is arranged perpendicular to the plane of the drawing from Figure 1”).

Therefore, it is evident that Figure 1 is a perpendicular side view on the device and that the shape of the curvature, i.e., the shape of a segment of a conic section, which includes a circular arc with a certain radius (see page 6, paragraph [0019], line 7) as well as a segment of an ellipse, a hyperbola or a parabola, relates to a perpendicular cross-section of the curvature.

Claim Objections

The Examiner has objected to Claim 2, and notes that there is no proper antecedent basis for the “connection line” as recited in Claim 2. The feature “connection line” has been deleted in amended Claim 2.

Claim Rejections Under 35 USC 112

The Examiner has rejected Claim 2 under 35 USC 112 as being indefinite. The Examiner notes that it is unclear how the section can have a curvature in the direction of a connection line and, accordingly, Claim 2 has not been further examined on its merit.

Claim 2 has been amended to make clear that the section has a curvature in the direction of the capturing means.

The Examiner has rejected Claim 3 under 35 USC 112 as being indefinite. The Examiner notes that it is unclear how the curvature can have a cross-section that is a conic section since the curvature has not been disclosed as an element with a cross-section and, further, since an infinite number of cross-sections might be taken, and accordingly, Claim 3 has not been further examined on its merit.

Claim 3 has been amended to make clear that the curvature corresponds – in perpendicular cross-section – to a segment of a conic section.

Thus, Claims 2 and 3 have been amended to overcome the “112” rejections.

Claim Rejections Under 35 USC 102(b) and 103(a)

Claim 1 is rejected under 35 USC 102 as being anticipated by Copeland.

Applicant respectfully believes that amended Claim 1 is not anticipated by Copeland.

Claim Rejections Under 35 USC 103

Claim 1 is rejected under 35 USC 103 as being unpatentable over Arimura.

Applicant respectfully believes that amended Claim 1 is patentable over Arimura.

Claims 1, 4 and 5 are rejected as being unpatentable over Roy in view of Inaba.

Applicant respectfully believes that amended claims 1-3 overcome the “103” rejections and the present application is patentable over Roy in view of Inaba.

Discussion of “102” and “103” Rejections

Applicant respectfully traverses the rejections under 35 USC 102 and 35 USC 103 in view of the amendments to claims 1-3. Claims 2-6 depend from claim 1 and add further distinguishing elements.

The device according to the invention comprises a support surface (1) on whose first side an object can be placed, a light source (4) which is provided for emitting illuminating beams (2, 3) in the direction of the support surface (1) and a capturing means (5), which is provided for capturing the object placed on the support surface (2), wherein the first side of the support surface (1), on which the object can be placed, faces the illuminating beams (2, 3) and the capturing means (5). The first side of the support

surface (1) has a flat region (16) and – adjacent to this – a section (6) which is provided with a curvature determined by the two positions and which is arranged in such a way that the illuminating beams (3) are reflected by the section (6) in the direction of the capturing means substantially only in a diffuse manner.

Neither Copeland, nor Arimura, nor Roy, nor Inaba show a device for optically capturing objects, comprising a support surface on whose first side an object can be placed, a light source which is provided for emitting illuminating beams in the direction of the support surface, and a capturing means which is provided for capturing the object placed on the support surface, wherein the first side of the support surface, on which the object can be placed, faces the illuminating beams and the capturing means, and wherein the first side of the support surface has a flat region and – adjacent to this – a section which is provided with a curvature determined by the two positions and which is arranged in such a way that the illuminating beams are reflected by the section in the direction of the capturing means substantially only in a diffuse manner.

Neither Roy et. al, nor Inaba teach a support surface with a flat region and – adjacent to this – a section which is provided with a curvature, wherein an object can be placed on the first side of the support surface and therefore on both the flat region and the section which is provided with a curvature, and wherein the first side faces both the illuminating beams and the capturing means. Therefore, even the combination of the teaching of Roy and the teaching of Inaba would not lead to the invention as claimed.

Allowable Subject Matter

The Examiner has determined that claim 6 would be allowable if rewritten to include the features of the rejected base claim. Since Applicant now respectfully believes

